WASHINGTON DEPARTMENT OF ECOLOGY

ENVIRONMENTAL ASSESSMENT PROGRAM

FRESHWATER MONITORING UNIT

STREAM DISCHARGE TECHNICAL NOTES

STATION ID: 32E050

STATION NAME: North Fork Touchet River above Dayton

WATER YEAR: 2013

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Introduction

Watershed Description

The North Fork Touchet River originates deep in the Blue Mountains at an elevation of over 6,000 feet. The watershed of the North Fork Touchet River is mainly forested with small farms in the valleys of the lower section. The North Fork Touchet River joins the South Fork Touchet River just above the city of Dayton to form the mainstem Touchet River. It contains a population of steelhead, spring Chinook, and bull trout.

Gage Location

The gage is located on the left bank, downstream of the South Fork Touchet Road bridge, southeast of the town of Dayton, WA. It is located at river mile 0.5.

Table 1.

Drainage Area (square miles)	112 (Streamstats)
Latitude (degrees, minutes, seconds)	46° 17" 50" N
Longitude (degrees, minutes, seconds)	117° 57' 04" W

Discharge

Table 2. Discharge Statistics.

Mean Annual Discharge (cfs)	128
Median Annual Discharge (cfs)	97
Maximum Daily Mean Discharge (cfs)	479
Minimum Daily Mean Discharge (cfs)	34
Maximum Instantaneous Discharge (cfs)	601
Minimum Instantaneous Discharge (cfs)	32
Discharge Equaled or Exceeded 10 % of Recorded Time (cfs)	251
Discharge Equaled or Exceeded 90 % of Recorded Time (cfs)	43
Number of Days Discharge is Greater Than Range of Ratings	0
Number of Days Discharge is Less Than Range of Ratings	3

Note: Statistics displayed in Table 2 may not include values in which the predicted discharge exceeds the range of ratings.

Narrative

Peak flow occurred on December 2, 2012, during a rain on snow event.

Error Analysis

Table 3. Error Analysis Summary.

Logger Drift Error (% of discharge)	12.8*
Weighted Rating Error (% of discharge)	12.0
Total Potential Error (% of discharge)	24.8

Rating Table(s)

Table 4. Rating Table Summary

Rating Table No.	8	9	801
Period of Ratings	10/1/12 to 10/29/12	10/1/12 to 9/16/13	7/11/13 to 9/30/13
Range of Ratings (cfs)	26 to 3630	26 to 3630	26 to 3630
No. of Defining Measurements	8	8	8
Rating Error (%)	12.8	11.8	12.8

Rating Table No.			
Period of Ratings			
Range of Ratings (cfs)			
No. of Defining Measurements			
Rating Error (%)			

Rating Table No.			
Period of Ratings			
Range of Ratings (cfs)			
No. of Defining Measurements			
Rating Error (%)			

Narrative

Eight discharge measurements were taken throughout the water year, ranging from 44 to 349 cfs.

Stage Record

Table 5. Stage Record Summary

Minimum Recorded Stage (feet)	0.33
Maximum Recorded Stage (feet)	2.56
Range of Recorded Stage (feet)	2.23
Number of Un-Reported Days	0
Number of Days Qualified as Estimates	95
Number of Days Qualified as Unreliable Estimates	0

Narrative

The data from October 2012 was discarded and replaced with data from Ecology station 32B100, Touchet River at Bolles Road. This was due to the terminal end being separated from the main channel. This data was also corrected to match the regressed gage heights. At the end of October, the slant pipe was rerun downstream into the main channel.

*The logger drift percentage recorded above, only covers the November 2012 through September 2013 period.

Modeled Discharge

Table 6. Model Summary

Model Type (Slope conveyance, other, none)	Slope Conveyance
Range of Modeled Stage (feet)	4.0 to 6.0
Range of Modeled Discharge (cfs)	1500 to 3630
Valid Period for Model	WY 2013
Model Confidence	6.6%

Surveys

Table 7. Survey Type and Date (station, cross section, longitudinal)

Type	Date
n/a	n/a

Activities Completed

Slant pipe rerun downstream of gravel bar, into the main channel. Laser level will be used in place of staff gage.